

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A M~~ethod to have of~~ a real time data communication between a first user (~~U1~~) of a source (~~S~~) and a second user (~~U2~~) of a destination (~~DT~~) ~~via~~ at least partly via a real time data transport protocol over Internet Protocol communication network, said method comprising:

transmitting by ~~a transmitting means (TR)~~ of said source (~~S~~) at least two packets (~~T1, T2, T3, T4~~) to said destination (~~D~~); and

determining by ~~a receiving means (REC)~~ of said destination (~~D~~) for each one (~~T2~~) of said at least two packets (~~T1, T2, T3, T4~~), time information (~~T2_t2~~) related to a receiving time (~~t2~~) of said packet (~~T2~~),

wherein said method further comprises:

applying by said ~~transmitting means (TR)~~ source, for each one (~~T2~~) of said at least two packets, (~~T1, T2, T3, T4~~) a predefined packet length (~~l2~~) out of a plurality of packet lengths (~~l1, l2, ..., li~~) ~~in order to be transmitted according to said transmitting step;~~
and

~~determining by a first determining means (DET1), according to each said time information (T1_t1, T2_t2, T3_t3, T4_t4) associated to said at least two packets (T1, T2, T3, T4) of said receiving means (REC), and according to each said predefined packet length (l1, l2, l3, l4) associated to said at least two packets,~~ characteristics of a first

relation ~~($f_1(T, \alpha)$)~~ between a packet length of a packet to be transmitted from said source ~~(S)~~ to said destination ~~(D)~~ and a source to destination delay ~~(d_{S2D})~~ being which is a time period between said transmission of said packet by said source ~~(S)~~ and reception of said packet by said destination ~~(D)~~; and

determining ~~by a second determining means (DET2)~~ a preferred mouth to ear delay ~~($d_{M2E-pref}$)~~ according to a preferred quality rating ~~(Q_{-pref})~~ for said real time data communication; and

determining ~~by a third determining means (DET3)~~ an optimal packet length ~~(l_{-opt})~~ for said preferred mouth to ear delay ~~($d_{M2E-pref}$)~~ and according to said characteristics of said first relation ~~($f_1(T, \alpha)$)~~ ~~in order to be applied by said source (S) for~~ packets being transmitted during said real time data communication.

2. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein said step of determining ~~by said third determining means (DET3)~~ said optimal packet length further comprises determining said optimal packet length ~~(l_{-opt})~~ also according to characteristics of a second function ~~$f_2(T_{enc}, R_{cod})$~~ , said characteristics of said second function ~~$f_2(T_{enc}, R_{cod})$~~ being determined ~~and provided by a fourth determining means (DET4)~~ according to a relation between a packet length and an intrinsic source ~~(S)~~ delay.

3. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein said characteristics of said first relation are determined by a first determining means and said optimal packet length is determined by a third determining means, and wherein said method further comprises a step of providing said characteristics of said first relation ~~($f_1(T, \alpha)$)~~

from said first determining means (~~DET1~~) to said third determining means (~~DET3~~) by using reports of a real time transport protocol (~~RTP~~) control protocol (~~RTCP~~).

4. (Currently Amended) The method according to claim 1, ~~characterized in by~~ further comprising the steps of tuning said preferred quality rating during said real time data communication, repeating said steps of said method and determining thereby ~~according to said step of determining by a third determining means an optimal packet length~~, an adapted optimal packet length (~~l-opt~~) ~~in order~~ to be applied by said source for packets being transmitted during a following part of said real time data communication.

5. (Currently Amended) A Ssource (~~S~~) for use by a first user (~~U1~~) ~~to have a communication communicate~~ at least partly via a real time data transport protocol over Internet Protocol communication network (~~IP~~) with a second user (~~U2~~) of a destination (~~D~~) ~~coupled to said source (S)~~, said source comprising a ~~transmitting means (TR) to transmit~~ transmitter which transmits at least two packets (~~T1, T2, T3, T4~~) to said destination (~~D~~) in order to enable a ~~receiving means (REC) of~~ receiver at said destination (~~D~~) to determine, for each one (~~T2~~) of said at least two packets (~~T1, T2, T3, T4~~), time information (~~T2-t2~~) related to a receiving time (~~t2~~) of said each one packet (~~T2~~), wherein

said ~~transmitting means (TR) is enabled to apply~~ transmitter uses for each one (~~T2~~) of said at least two packets (~~T1, T2, T3, T4~~) a predefined packet length (~~l2~~) out of a plurality of packet lengths (~~l1, l2, ..., li~~) ~~in order to be transmitted accordingly~~, and

said source (~~S~~) ~~further comprises a first interface (IN1) to interface with a third determining means (DET3) and to receive~~ is responsive to an optimal packet length input to apply an optimal packet length (~~l-opt~~) ~~to be applied by said source (S)~~ for packets being transmitted

during said real time data communication, said optimal packet length (l_{opt}) being determined by ~~said third determining means (DET3)~~ for in accordance with a preferred mouth to ear delay (d_{M2E_pref}) ~~being provided by a second determining means (DET2)~~ and according to in accordance with characteristics of a first relation ($f_1(T, \alpha)$) ~~being provided by a first determining means (DET1)~~, said characteristics of said first relation ($f_1(T, \alpha)$) ~~which is a relation between a~~ packet length of a packet to be transmitted from said source (S) to said destination (D) and a source to destination delay (d_{S2D}) ~~being which is~~ a time period between said transmission of said packet by said source (S) and reception of said packet by said destination (D), said first relation being determined by said first determining means (DET1) according to time information ($T_1_t1, T_2_t2, T_3_t3, T_4_t4$) ~~being associated to~~ with each one of said at least two packets (T_1, T_2, T_3, T_4) and according to each said predefined packet length (l_1, l_2, l_3, l_4) ~~being associated to~~ with said at least two packets (T_1, T_2, T_3, T_4), said preferred mouth to ear delay (d_{M2E_pref}) being determined ~~by said second determining means (DET2)~~ according to a preferred quality rating (Q) for said real time communication.

6. (Currently Amended) The source (S) according to claim 5, ~~characterized in that~~ said source further ~~comprises~~ comprising a third interface (IN3) to provide ~~to a fourth~~ ~~determining means (DET4)~~ source intrinsic information in order to enable ~~thereby said fourth~~ ~~determining means (DET4)~~ to ~~determine~~ determination of characteristics of a second function $f_2(T_{enc}, Reed)$ ~~being which is~~ a relation between a packet length and an intrinsic source (S) delay, and to provide said characteristics of said second function $f_2(T_{enc}, Reed)$ ~~to said third~~ ~~determining means (DET3)~~, and ~~in order to enable said third determining means (DET3) to~~

~~determine~~for use in determining said optimal packet length (~~l_{opt}~~) also according to said characteristics of said second function (~~f₂(T_{enc}, R_{cod})~~).

7. (Currently Amended) The source (~~S~~) according claim 5, ~~characterized in that~~wherein said source (~~S~~) comprises ~~any one of said second determining means (DET2) and said third determining means (DET3)~~means for determining at least one of said optimal packet length and said preferred mouth to ear delay.

8. (Currently Amended) The source (~~S~~) according to claim 6, ~~characterized in that~~wherein said source (~~S~~) comprises ~~said fourth determining means (DET4)~~means for determining said characteristics of said second function.

9. (Currently Amended) A destination (~~D~~) for use by a second user (~~U2~~) to ~~have a communication~~communicate at least partly via a real time data transport protocol over Internet Protocol communication network (~~IP~~) with a first user (~~U1~~) of a source (~~S~~) ~~coupled to said destination (D)~~, said destination (~~D~~) comprising ~~receiving means (REC) to receive a receiver which receives~~ at least two packets (~~T1, T2, T3, T4~~) from said source (~~S~~) in order to determine for each one (~~T2~~) of said at least two packets (~~T1, T2, T3, T4~~) time information (~~T2_{-t2}~~) related to a receiving time (~~t2~~) of said each one packet (~~T2~~), wherein:

for each one (~~T2~~) of said at least two packets (~~T1, T2, T3, T4~~) said source applies a predefined packet length (~~l2~~) out of a plurality of packet lengths (~~l1, l2, ..., li~~) ~~is applied by said source (S); and~~

said ~~receiving means (REC)~~ receiver further comprises ~~aan~~ second interface (~~IN2~~) to provide to ~~a first determining means~~ said time information (~~T1_{-t1}, T2_{-t2}, T3_{-t3}, T4_{-t4}~~) in order to enable ~~said first determining means (DET1) to determine~~determination, according to each said

time information $(T1_t1, T2_t2, T3_t3, T4_t4)$ associated ~~to~~with said at least two packets $(T1, T2, T3, T4)$, and according to each said predefined packet length $(l1, l2, l3, l4)$ associated ~~to~~with said at least two packets $(T1, T2, T3, T4)$, characteristics of a first relation $(f1(T, \alpha))$ between a packet length of a packet to be transmitted from said source (S) to said destination (D) and a source to destination delay (d_S2D) ~~being~~which is a time period between said transmission of said packet by said source (S) and reception of said packet by said destination (D) ; and in order to enable ~~a third determining means (DET3) to determine~~determination of an optimal packet length (l_opt) for a preferred mouth to ear delay (d_M2E_pref) according to said characteristics of said first relation $(f1(T, \alpha))$ and to enable thereby said source terminal to apply said optimal packet length (l_opt) for transmission of packets of said real time data communication (C) , said preferred mouth to ear delay (d_M2E_pref) being determined ~~by a second determining means (DET2)~~ according to a preferred quality rating (Q_pref) for said real time data communication.

10. (Currently Amended) The destination (D) according to claim 9, ~~characterized in that~~wherein said destination (D) further comprises ~~said first determining means (DET1) for determining said characteristics of said first relation.~~

11. (Currently Amended) A communication network ~~characterized in that~~wherein said network comprises a source (S) according to claim 5.

12. (Currently Amended) A communication network ~~characterized in that~~wherein said network comprises a destination (D) according to claim 9.